THE RELATIONSHIP BETWEEN TEACHERS' EDUCATION AND THEIR SELF-PERCEIVED COMPETENCE FOR TEACHING HOME ECONOMICS

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Abstract

Relevant teacher qualifications that include specialist knowledge and knowledge in didactics significantly influence the level of achievement of education goals during the teaching process. Teacher's perception of their own professional competence to teach may depend on their qualification which is linked to the education obtained. The purpose of the research was to find out how teachers who teach Home Economics in Slovenian elementary schools estimate their competence to teach Home Economics contents, in reference to their formal education. 89 teachers of 5th and 6th grade Home Economics participated in the research. They were classified according to their formal education, either in the group with completed Home Economics studies (relevant education) or in the group without these studies (irrelevant education). A questionnaire was developed for the teachers to assess their own teaching competence. The obtained data was analysed with descriptive and inferential statistical methods. Results indicated that teachers with completed home economics studies who teach Home Economics feel more competent to teach Home Economics contents than teachers without completed relevant studies. Differences in their perceptions exist in all four Home Economics modules, i.e. economics, textile and clothing, living and environment, food and nutrition. This leads to the conclusion that relevant teacher education is important for teaching Home Economics in all specialist areas of home economics education. As regards providing quality education process and achieving Home Economics education goals, the results indicate that relevant qualifications of teachers should be ensured. Teachers with irrelevant education should be provided with additional professional training.
Keywords: *teachers' education, teachers' competencies, Home Economics, Home Economics teachers, home economics education.*

Introduction

During their studies and in the process of life-long learning, teachers acquire professional and didactic skills, which significantly influence their professional development and competence for teaching contents foreseen in the curriculum of a particular school subject. Irrelevant education and insufficient professional competencies of a teacher who teaches Home Economics may reduce the quality of teaching and influence her or his self-perceived competence to teach Home Economics contents.

The acquired competencies are the basis of quality and effective teaching and also a condition to achieve education goals foreseen in the education process in a specialist area (Ülger, Yiğittir & Ercan, 2014). Razdevšek Pučko & Rugelj (2006) define teacher's competencies as abilities, knowledge, skills and qualifications of a teacher, necessary to implement the goals of the subject she or he teaches. Kelemen (2012) adds that in order to realise professional

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education activities, teacher's competencies have to include their own motivation, in addition to their knowledge, skills and capabilities. Teachers' competence reflects also in their conveying the most recent and correct information and in choosing the most appropriate teaching method, since these two influence the interest, knowledge and skills that children have to attain according to prescribed learning goals (Oogarah-Pratap, Bholah, Cyparsade & Mathoor, 2004; Ednah, 2012). Literature provides different definitions of competencies, such as Weinert (2001), who defines competencies as cognitive capabilities and skills of solving specific problems, linked to motivational and social dispositions, to be used in various situations. Tancig (2006) considers competencies to be composite capacities that include discursive and practical knowledge and represent a combination of knowledge, understanding, skills, abilities and values. De Bueger and Vander Borght (1996, in Naumescu, 2008) define them as qualification to carry out tasks or activities that require knowledge, its acquisition and use.

Numerous researches point out the issue of irrelevant competence of teachers who teach Home Economics (Dewhurst & Pendergast, 2008; Lindblom, Erixon Arreman & Hörnell, 2013; Håkansson, 2015). Ma & Pendergast (2011) and Slater (2013) have established that appointment of properly qualified Home Economics teachers is a problem, present in various school systems. Home Economics taught by teachers without relevant formal education amounts at between 20 % and 23 % of Swedish teachers (Lindblom, Erixon Arreman & Hörnell, 2013; Lange, Göranzon & Marklinder, 2014). According to some data (Skolverket, 2014, in Håkansson, 2015) their share is even higher, namely about 70 % of such teachers in Sweden. In Slovenian schools, Lah (2015) estimates at about 37 % of such teachers. Irrelevant teacher education raises doubts whether the learning goals prescribed for Home Economics will be obtained in the education process (Lindblom, Erixon Arreman & Hörnell, 2013). Øvrebø (2000, in Øvrebø, 2011) mentions that some Norwegian Home Economics teachers lack relevant qualifications; the existing deficiencies regarding relevant competencies may reflect in a lower quality of the learning process. A similar estimation is given by Slovenian researchers Kostanjevec, Jerman & Koch (2011), who state that irrelevant formal education of Home Economics teachers may be one of the reasons influencing the quality of teaching nutrition contents as part of Home Economics. It is important that Home Economics contents are taught by teachers with relevant formal education (Øvrebø, 2014), since their professional knowledge and consequently quality teaching of home economics literacy help develop home economics literacy in learners and guide them towards quality personal, family and social activities (Lichenstein & Ludwig, 2010; Fordyce-Voorham, 2011; Höijer, Hjälmeskog & Fjellström, 2011; Jarva, 2011; Pendergast & Dewhurst, 2012; Hira, 2013; Slater, 2013; Slater & Hinds, 2014).

Within Slovenian elementary school education programme, Home Economics classes should give learners knowledge on healthy lifestyle, on sustainable organisational forms of social and economic life, develop their responsibility for their own health, preserving natural environment, life-long learning and constant personal development, as well as develop their abilities for active participation in society. Home economics education is carried out in obligatory Home Economics subject in the 5th grade (children of 10 years of age) and in the 6th grade (children of 11 years of age) of Slovenian elementary school. The subject consists of four modules or content-related areas, namely economics, textile and clothing, living and environment, and food and nutrition. In a 35-hour module, 5th graders learn about economics, and textile and clothing contents. 52.5 hours are allotted to the 6th grade home economics education, with the contents related to the modules covering living and environment, and food and nutrition (Elementary school programme …, 2011). In Slovenia, Home Economics teachers are educated at the Faculty of Education of the University in Ljubljana. Students who select Home Economics study programme acquire general and subject specific competencies for teaching the subject. General competencies are obtained through acquiring knowledge and skills in the field of basic education sciences, while subject-specific competencies belong to the contents of Home Economics modules (Information Booklet …, 2017-18a). According to our legislation, 5th grade Home Economics can be taught by a class teacher; and 6th grade by

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a specialist subject teacher, which includes a Home Economics teacher, or even a class teacher (Elementary School Act, 2016). Rules on education of teachers and other expert workers in the elementary school education programme (2015) specify that Home Economics can be taught not only by teacher who has completed Home Economics study, but also by a teacher who has completed education for Primary School Teacher (the first cycle of elementary school). Additionally, 5th and 6th grades can be taught by a teacher who fulfils conditions for a biology or chemistry teacher in the elementary school education programme and has completed supplementary study programme in Home Economics. Banič & Koch (2015) observe that no official data on formal education of teachers who teach Home Economics is available in Slovenia. Based on information in elementary school web pages, 170 class teachers who teach 5th grade Home Economics have been identified. According to Lah (2015), it is a frequent practice that teachers also teach Home Economics in the 6th grade. The graduates of primary school teacher study programme who are allowed to teach Home Economics are equipped with general, but not with subject-specific competencies that are essential to carry out Home Economics education (Information Booklet …, 2017-18b). In the 2017/18 school year, teachers are allowed to supplement 20 % of their obligations to reach full-time workload (Act Amending the Organization and Financing of Education Act, 2015). Teachers of various subjects may thus supplement their missing teaching obligations by teaching subjects for which they have not appropriate professional competencies.

The aim of the research carried out among Slovenian Home Economics teachers was to determine teachers' self-perceived competence for teaching particular Home Economics contents, in the perspective of their differing formal education.

Methodology of Research

The research is based on a quantitative study, the purpose of which was to determine the connection between teachers' education and their self-perceived competence for teaching home economics contents. For the purpose of the research, a survey questionnaire was created to be filled in by teachers who teach Home Economics in elementary schools.

Sample of Research

The study included 452 elementary schools in Slovenia. E-mail addresses of all 452 elementary schools were obtained from the national teacher database available on the webpages of the Ministry of education, science and sport of the Republic of Slovenia and teachers teaching Home Economics were invited to participate in the survey. The on-line questionnaire was completely answered by 89 teachers teaching 5th and 6th grade Home Economics. These respondents represent the final research sample. There were 86 (96.6 %) women and 3 (3.4 %) men. There were 57 teachers (64 %) with completed Home Economics studies, and 32 teachers (36 %) who were not educated in the field of Home Economics. Teachers with completed Home Economics study programme were classified in the group of teachers with relevant formal education to teach Home Economics, while the teachers who were not qualified to teach Home Economics as students were designated to the group of teachers with irrelevant formal education. The latter consisted of class teachers, biology and chemistry teachers, maths and physics teachers, geography and history teachers, natural history teachers, an arts teacher and a teacher with completed food technology studies.

Instrument and Procedures

A survey questionnaire was developed for the purpose of the research. The questionnaire was based on a previous study of teachers' competencies to teach natural science subjects (Glažar, Devetak, Gaberščik, Golli, Koch, Vrtačnik, Sajovic & Šket, 2006) and on the Home Economics

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curriculum (Elementary school programme …, 2011). The first part of the questionnaire included questions about respondents' demographic data. The second set of questions measured teachers' own assessment of their competence for teaching the contents of particular parts of Home Economics subject. Questions were divided into in four content areas of Home Economics, namely (1) economics; (2) textile and clothing; (3) living and environment, and (4) food and nutrition. Teachers' assessment of their own competence was measured with a 4-point Likert scale of attitudes. The 4-point Likert scale was chosen to avoid the error of the median value and to simplify teachers' choices in the survey.

Table 1. Internal consistency of the analysed sets of statements.

Set of statements	Number of items	α
Economics	8	.925
Textile and clothing	6	.920
Living and environment	6	.898
Food and nutrition	14	.945

The internal consistency of the sets of statements in all four content areas of Home Economics in questionnaire was tested with Cronbach alfa coefficient. It was found out that the internal consistency of the four sets of questions was relevant (Table 1).

Data Analysis

Statistical data analysis was carried out with the SPSS computer programme. Data was analysed with descriptive and inferential analysis. Frequency distribution and basic descriptive statistics (mean values, variability) were used. Differences in competence assessment in reference to the education were determined with the Mann-Whitney U Test. Particular Home Economics modules and the education of teachers were compared using the univariate analysis of variance (ANOVA) with repeated measures and Bonferroni post hoc analysis. The statistical differences were evaluated at significance level $p < .05$.

Results of Research

Economics Module

Within Home Economics subject, the economics module covers contents related to financial literacy, and to home, family and free time activities. Based on Home Economics curriculum (Elementary school programme …, 2011), this module emphasises eight content-related units for which differences in teachers' self-assessment of their teaching competence in reference to their formal education were tested.

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Table 2. Teachers' self-assessment of their competence to teach the contents of economics module in reference to their education.

Contents of economics module	Education	N	1		2		3		4		M[a]	SD	U	p
			f	f %	f	f %	f	f %	f	f %				
Significance of home and family	Relevant	57	0	0.0	2	3.5	18	31.6	37	64.9	3.61	0.559	727.000	.068
	Irrelevant	32	0	0.0	1	3.1	17	53.1	14	43.8	3.41	0.560		
Wishes and need fulfilment	Relevant	57	0	0.0	2	3.5	21	36.8	34	59.6	3.56	0.567	750.500	.117
	Irrelevant	32	0	0.0	3	9.4	15	46.9	14	43.8	3.34	0.653		
Time management	Relevant	57	0	0.0	5	8.8	21	36.8	31	54.4	3.46	0.657	821.000	.383
	Irrelevant	32	0	0.0	1	3.1	18	56.2	13	40.6	3.38	0.554		
Money (its history and types)	Relevant	57	0	0.0	3	5.3	26	45.6	28	49.1	3.44	0.598	711.500	.054
	Irrelevant	32	0	0.0	3	9.4	20	62.5	9	28.1	3.19	0.592		
Income and expenses, budget planning	Relevant	57	0	0.0	2	3.5	21	36.8	34	59.6	3.56	0.567	601.500	.003
	Irrelevant	32	0	0.0	4	12.5	19	59.4	9	28.1	3.16	0.628		
Functions of money	Relevant	57	0	0.0	1	1.8	23	40.4	33	57.9	3.56	0.535	560.000	.001
	Irrelevant	32	0	0.0	3	9.4	22	68.8	7	21.9	3.13	0.554		
Types of money	Relevant	57	0	0.0	2	3.5	23	40.4	32	56.1	3.53	0.570	614.500	.004
	Irrelevant	32	0	0.0	3	9.4	21	65.6	8	25.0	3.16	0.574		

[a] Average value (M) is calculated based on 4-point Likert scale (1 – not competent, 2 – somewhat competent, 3 – competent, 4 – highly competent).

Results indicate that teachers with appropriate formal education expressed statistically significant higher level of agreement with their competence for teaching contents on income, expenses and budgeting (p = .003); functions of money (p = .001) and types of money (p = .004). Differences in other contents (the significance of home and family, wishes and fulfilment of needs, time management, the history of money and the preparation of financial plans) were not statistically significant, however, in all cases the teachers with relevant formal education assessed themselves to be more competent to teach the above-mentioned contents than the teachers with irrelevant formal education (Table 2).

Textile and Clothing Module

The textile module should give learners appropriate knowledge and skills for appropriate choice, maintenance and recycling or removal of textiles. Teachers thus had to assess their competence in reference to the contents linked to textile fibres, mechanical fibre processing, finished products (clothes, their maintenance) and textile purchases.

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Table 3. Teachers' self-assessment of their competence to teach the contents of textile and clothing module in reference to their education.

Contents of the textile and clothing	Education	N	1		2		3		4		M[a]	SD	U	p
			f	f %	f	f %	f	f %	f	f %				
Textile raw materials (fibres)	Relevant	57	0	0.0	3	5.3	23	40.4	31	54.4	3.49	0.601	535.000	.001
	Irrelevant	32	0	0.0	7	21.9	19	59.4	6	18.8	2.97	0.647		
Fibre processing (mechanical procedures and finishing)	Relevant	57	0	0.0	10	17.5	21	36.8	26	45.6	3.28	0.750	579.500	.002
	Irrelevant	32	0	0.0	11	34.4	17	53.1	4	12.5	2.78	0.659		
Types and uses of fabrics	Relevant	57	0	0.0	3	5.3	21	36.8	33	57.9	3.53	0.601	600.000	.003
	Irrelevant	32	0	0.0	4	12.5	20	62.5	8	25.0	3.13	0.609		
Types of clothes and roles of clothing	Relevant	57	0	0.0	1	1.8	18	31.6	38	66.7	3.65	0.517	637.000	.007
	Irrelevant	32	0	0.0	2	6.2	18	56.2	12	37.5	3.31	0.592		
Planning purchases of textile products	Relevant	57	0	0.0	0	0.0	20	35.1	37	64.9	3.65	0.481	652.000	.010
	Irrelevant	32	0	0.0	1	3.1	19	59.4	12	37.5	3.34	0.545		
Care and maintenance of textiles and shoes	Relevant	57	0	0.0	1	1.8	22	38.6	34	59.6	3.58	0.533	601.500	.003
	Irrelevant	32	0	0.0	3	9.4	20	62.5	9	28.1	3.19	0.592		

[a] Average value (M) is calculated based on 4-point Likert scale (1 – not competent, 2 – somewhat competent, 3 – competent, 4 – highly competent).

Results show that teachers with relevant formal education have a statistically significant higher level of agreement ($p < .05$) to be competent for teaching the above-mentioned contents than teachers with irrelevant formal education (Table 3). Results reveal that both, teachers with relevant and with irrelevant formal education, feel the least competent to teach the contents linked to raw materials and fibre processing, while both feel more competent to teach the contents about fabrics, clothes, purchasing and maintaining textiles.

Living and Environment Module

In Home Economics, there are numerous contents giving teachers opportunity to deal with and implement the concept of sustainable development in their lessons. In the living and environment module, the teaching process includes contents encouraging learners to adopt sustainable consumer decisions.

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Table 4. Teachers' self-assessment of their competence to teach the contents of living and environment module in reference to their education.

Living and environment module contents	Education	N	1		2		3		4		M[a]	SD	U	p
			f	f %	f	f %	f	f %	f	f %				
Eco-conscious consumer	Relevant	57	0	0.0	0	0.0	21	36.8	36	63.2	3.63	0.487	789.000	.221
	Irrelevant	32	0	0.0	3	9.4	12	37.5	17	53.1	3.44	0.669		
Sustainable development	Relevant	57	0	0.0	8	14.0	26	45.6	23	40.4	3.26	0.695	824.500	.409
	Irrelevant	32	0	0.0	4	12.5	19	59.4	9	28.1	3.16	0.628		
Production and consumption	Relevant	57	0	0.0	5	8.8	20	35.1	32	56.1	3.47	0.658	624.500	.006
	Irrelevant	32	0	0.0	3	9.4	22	68.8	7	21.9	3.13	0.554		
Attitude towards consumerism	Relevant	57	0	0.0	1	1.8	30	52.6	26	45.6	3.44	0.535	773.500	.178
	Irrelevant	32	0	0.0	3	9.4	18	56.2	11	34.4	3.25	0.622		
Publicity	Relevant	57	0	0.0	2	3.5	29	50.9	26	45.6	3.42	0.565	866.500	.661
	Irrelevant	32	0	0.0	3	9.4	15	46.9	14	43.8	3.34	0.653		
Consumer rights	Relevant	57	0	0.0	0	0.0	30	52.6	27	47.4	3.47	0.504	735.500	.081
	Irrelevant	32	0	0.0	2	6.2	20	62.5	10	31.2	3.25	0.568		

[a] Average value (M) is calculated based on 4-point Likert scale (1 – not competent, 2 – somewhat competent, 3 – competent, 4 – highly competent).

It was found out that teachers with relevant formal education for teaching Home Economics, if compared to teachers without relevant formal education, assess themselves more competent for teaching living and environment contents. A difference was established in all selected contents, while statistically significant difference ($p = .006$) was detected in production and consumption contents (Table 4).

Food and Nutrition Module

Food and nutrition module contents are treated in Home Economics classes in the 6th grade of elementary school. Learners acquire basic nutrition knowledge about the composition of foodstuffs, healthy eating habits, daily meals planning, eating etiquette and appropriate and sustainable use of foodstuffs. There is a high share of teachers with relevant education who estimate to be very competent to teach particular nutrition contents.

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Table 5. Teachers' self-assessment of their competence to teach the contents of food and nutrition module in reference to their education.

Contents of food and nutrition module	Education	N	1		2		3		4		M[a]	SD	U	p
			f	f %	f	f %	f	f %	f	f %				
Proper, safe and protective diet	Relevant	57	0	0.0	0	0.0	15	26.3	42	73.7	3.74	0.444	810.000	.273
	Irrelevant	32	0	0.0	0	0.0	12	37.5	20	62.5	3.63	0.492		
Influence of good and bad eating habits on our health	Relevant	57	0	0.0	0	0.0	11	19.3	46	80.7	3.81	0.398	860.000	.531
	Irrelevant	32	0	0.0	0	0.0	8	25.0	24	75.0	3.75	0.440		
Nutrients and nutrition value in foodstuffs	Relevant	57	0	0.0	0	0.0	7	12.3	50	87.7	3.88	0.331	653.500	.002
	Irrelevant	32	0	0.0	0	0.0	13	40.6	19	59.4	3.59	0.499		
Energy value of foodstuffs	Relevant	57	0	0.0	0	0.0	8	14.0	49	86.0	3.86	0.350	543.500	.001
	Irrelevant	32	0	0.0	3	9.4	14	43.8	15	46.9	3.38	0.660		
Energy needs of a person	Relevant	57	0	0.0	0	0.0	13	22.8	44	77.2	3.77	0.423	616.000	.002
	Irrelevant	32	0	0.0	3	9.4	14	43.8	15	46.9	3.38	0.660		
Food pyramid	Relevant	57	0	0.0	0	0.0	6	10.5	51	89.5	3.89	0.310	694.500	.006
	Irrelevant	32	0	0.0	0	0.0	11	34.4	21	65.6	3.66	0.483		
Food labelling	Relevant	57	0	0.0	0	0.0	15	26.3	52	73.7	3.74	0.444	709.500	.035
	Irrelevant	32	0	0.0	2	6.2	13	40.6	17	53.1	3.47	0.621		
Correct storing of food	Relevant	57	0	0.0	0	0.0	8	14.0	49	86.0	3.86	0.350	694.000	.010
	Irrelevant	32	0	0.0	1	3.1	11	34.4	20	62.5	3.59	0.560		
Safe preparation of food	Relevant	57	0	0.0	0	0.0	8	14.0	49	86.0	3.86	0.350	694.000	.010
	Irrelevant	32	0	0.0	1	3.1	11	34.4	20	62.5	3.59	0.560		
Eating etiquette	Relevant	57	0	0.0	0	0.0	10	17.5	47	82.5	3.82	0.384	753.500	.066
	Irrelevant	32	0	0.0	1	3.1	10	31.2	21	65.6	3.63	0.554		
Serving food	Relevant	57	0	0.0	4	7.0	28	49.1	25	43.9	3.37	0.616	745.000	.114
	Irrelevant	32	0	0.0	6	18.8	16	50.0	10	31.2	3.13	0.707		
Kitchen utensils and household appliances	Relevant	57	0	0.0	0	0.0	13	22.8	44	77.2	3.77	0.423	758.500	.094
	Irrelevant	32	0	0.0	3	9.4	9	28.1	20	62.5	3.53	0.671		
Modification of nutrients in foodstuffs during heat and mechanical treatment	Relevant	57	0	0.0	3	5.3	14	24.6	40	70.2	3.65	0.582	699.500	.034
	Irrelevant	32	0	0.0	3	9.4	14	43.8	15	46.9	3.38	0.660		
Planning of menus	Relevant	57	0	0.0	1	1.8	19	33.3	37	64.9	3.63	0.522	622.000	.005
	Irrelevant	32	0	0.0	5	15.6	15	46.9	12	37.5	3.22	0.706		

[a] Average value (M) is calculated based on 4-point Likert scale (1 – not competent, 2 – somewhat competent, 3 – competent, 4 – highly competent).

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It exceeds 50 % of teachers in all contents in question, except the one about serving food. Teachers without relevant formal education assess their competence similarly, however, in a lower share. The comparison of average estimates of competence indicates that average estimates are higher in teachers with relevant formal education, however, the differences are not statistically significant in all cases (Table 5).

Table 6. Teachers' self-assessment of their competence to teach the contents of particular Home Economics modules in reference to their education.

Module	Education	N	M	SE	U	p
Economics	Relevant	57	3.53	0.064	638.000	.016
	Irrelevant	32	3.25	0.085		
Textile and clothing	Relevant	57	3.53	0.065	505.500	.001
	Irrelevant	32	3.12	0.087		
Living and environment	Relevant	57	3.45	0.063	739.000	.134
	Irrelevant	32	3.26	0.085		
Food and nutrition	Relevant	57	3.76	0.050	576.000	.004
	Irrelevant	32	3.49	0.066		

The research included a comparison of total average estimation of teachers' competence in reference to the set of statements of a particular module, and in reference to the teachers' relevant or irrelevant education. Differences in teachers' assessments of their competence in reference to the relevance of their education are statistically significant in food and nutrition, textile and clothing and economics modules, and there is a statistically insignificant difference in living and environment module (Table 6).

Table 7. Pairwise comparisons between pairs of Home Economics modules in the group of teachers with relevant education.

Module 1	Module 2	Mean Difference	SE	p**
Economics	Textile and clothing	0.002	0.054	1.000
	Living and environment	0.081	0.041	.322
	Food and nutrition	- 0.229*	0.054	.001
Textile and clothing	Living and environment	0.079	0.058	1.000
	Food and nutrition	- 0.231*	0.054	.000
Living and environment	Food and nutrition	0.310*	0.050	.001

Based on estimated marginal means

* The mean difference is significant at the .05 level.

** Adjustment for multiple comparisons: Bonferroni.

It was found out that teachers with relevant education feel the most competent in teaching food and nutrition module (M = 4.76). Partial comparison of competence of relevantly educated teachers in reference to a particular module demonstrated a statistically significant difference between the food and nutrition module and all other modules, while differences

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between economics, textile and clothing, and living and environment modules were statistically insignificant (Table 7).

Table 8. Pairwise comparisons between pairs of Home Economics modules in the group of teachers with irrelevant education.

Module 1	Module 2	Mean Difference	SE	p**
Economics	Textile and clothing	0.130	0.067	.367
	Living and environment	- 0.010	0.068	1.000
	Food and nutrition	- 0.243	0.104	.157
Textile and clothing	Living and environment	- 0,141	0,086	,673
	Food and nutrition	- 0,374*	0,106	,008
Living and environment	Food and nutrition	- 0,233	0,107	,225

Based on estimated marginal means

* The mean difference is significant at the .05 level.

** Adjustment for multiple comparisons: Bonferroni.

Teachers with irrelevant formal education feel the most competent to teach food and nutrition module (M = 3.49), and the least the contents of textile and clothing module (M = 3.12). The analysis of competence assessment by teachers with irrelevant formal education shows a statistically significant difference only between food and nutrition, and textile and clothing modules, while other modules present no statistically significant difference (Table 8).

Discussion

The results of this research point out that the perception of competence to teach Home Economics contents by Home Economics teachers is influenced by their education. Teachers who have completed Home Economics studies feel more competent to teach economics, textile and clothing, and food and nutrition contents than teachers who have not completed Home Economics studies. In the researched sample of teachers, there are also differences in the contents of living and environment module, however, they are statistically insignificant. Øvrebø (2014) considers that relevant education of teachers who teach Home Economics subject promotes their connecting theoretical knowledge to the acquisition of skills, which in turn may impact the knowledge and attitudes of learners to the contents in question. The estimation is that Home Economics study programme enables graduates to obtain fundamental professional and specialist didactic knowledge necessary to teach Home Economics, which in turn helps develop their awareness of their own competence to teach the relevant contents. This is an important factor in teaching, since teachers' own beliefs of their abilities can influence a learner's knowledge or achievement (Skaalvik & Skaalvik, 2007), it is also instrumental of the learner's interest for Home Economics and his or her acquiring skills (Oogarah-Pratap, Bholah, Cyparsade & Mathoor, 2004). Teacher's formal education can be connected to her or his quality of teaching and also to learners' achievements. Irrelevant formal education of teachers results in a lower degree of teachers' performance (Håkansson, 2015).

Teachers belonging to the group of teachers with irrelevant education do not acquire professional knowledge necessary to teach Home Economics modules during their studies, however, they get competencies linked to education work and to specialist field for which they are educated. During their study programmes intended to educate teachers, students obtain general knowledge about didactics, which can be, to a certain degree, also used in teaching Home

Economics contents. However, our estimation is that their weak knowledge of the specialist field of Home Economics lessens their teaching results. In Slovenia, Home Economics is taught only by the teachers who were educated for the teaching profession, however, it is not necessary for them to complete Home Economics studies. Teachers with completed Home Economics studies obtain subject-specific competencies and competencies in general education disciplines. Class teachers who often teach Home Economics do not obtain professional knowledge to teach Home Economics contents during their studies, since their study programme lacks relevant specialist contents, which in turn may influence their competence to teach Home Economics. Banič & Koch (2015) state that class teachers who teach Home Economics are appropriately trained to plan teaching Home Economics, however, there is an obvious deficiency due to the fact that their studies offered them no relevant subject-specific competencies to teach specialist contents. Teachers estimate that in the case of lacking subject-specific competencies, it is primarily their general knowledge and interest for a particular discipline that influence their acquisition of and familiarity with specialist home economics contents. Lindblom, Erixon Arreman & Hörnell (2013) estimate that the relevant formal education of a teacher teaching Home Economics is a prerequisite to teach Home Economics contents at the appropriate level.

As evident in the analysis of the teachers' assessment of their competence to teach particular Home Economics modules, teachers with relevant formal education assess the highest their competence to teach the contents of food and nutrition module (M= 3.76), followed by textile and clothing module (M= 3.53), and economics (M= 3.50); in their view they are the least competent to teach the contents of living and environment module (M= 3.45). The teachers with irrelevant formal education estimate to be the most competent to teach the contents of food and nutrition module (M= 3.50), then living and environment module (M= 3.26), and economics (M= 3.22), while assessing the least competence to teach the contents of textile and clothing module (M= 3.12).

The research demonstrates that both, teachers with relevant and those with irrelevant education, feel the most competent to teach the contents of food and nutrition module. As in Slovenia, teachers in other countries feel that the discipline in which they feel the most competent is the area of nutrition. For example, teachers in Louisiana who teach 7th graders estimate in as many as 93 % to be competent to teach nutrition contents (Murimi, Sample, Guthrie & Landry, 2007). It is estimated that Slovenian teachers additionally acquire the necessary contents in various forms of non-formal and informal nutrition education. This raises the question whether teachers with irrelevant education are competent to correctly evaluate various pieces of information obtained through non-formal and informal education, and whether they include them in their teaching in a proper way, since the teachers' irrelevant knowledge of this specialist field has an impact on the quality of the education process. Similar conclusion can be drawn for living and environment module, where no statistically significant difference between teachers with relevant and those with irrelevant education is discernible in their assessment of competence. This module includes the contents dealing with sustainable consumption and sustainable development, which are topics frequently treated in modern society and offer many opportunities for non-formal and informal education. In the research, teachers with irrelevant education tagged the textile and clothing module as the most difficult to teach. According to the assessment, textile contents are specific, they are not often discussed in media, appropriate specialist information is difficult to find, there are also insufficient resources for teachers to find ideas and various teaching aids to teach these contents. That's exactly why the education process should be taught by teachers who are relevantly educated in the specialist contents forming part of Home Economics literacy, and in the field of didactics. Permanent professional training of teachers who were not relevantly educated in the field of Home Economics education, should also be ensured. This is particularly necessary in order to provide an appropriate level of Home Economics literacy, important for acquiring knowledge and skills that influence the learners' quality of life.

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Conclusions

The results reveal the relationship between teachers' education and their self-perceived competence for teaching Home Economics. The teachers with irrelevant formal education assess their competence to teach Home Economics contents weaker than teachers with relevant formal education. This leads to the conclusion that Home Economics should be taught by teachers with relevant education, i.e. teachers with completed Home Economics studies, as this is the only way for them to acquire competencies for home economics education and its special didactics. Relevant teacher education may ensure quality teaching of Home Economics, which enables learners to acquire knowledge and skills they need in life. Further research would be needed to find out how the irrelevant education and insufficient competence of teachers directly impact achievement of Home Economics goals and standards of knowledge in learners.

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